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Country Market Survey

Computer Software and Service

France

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Now that all segments of French society have enthusiastically embraced computers, demand for associated software and services is gaining strength rapidly. Sales of software products and computer services amounted to $1.93 billion[1] in 1983, almost half as much as the $4.16 billion French market for computer hardware (see figure). Despite swift expansion of nearly 18 percent per annum predicted for software purchases, slowing growth in demand for computer services is expected to keep gains for the overall market down to about 15 percent a year. By 1987, expenditures for software and services are projected at some $3.3 billion (see table 1).

American suppliers of computer software and services have been slow to take advantage of the French fascination with "informatique." The strong position held by U.S.-based hardware vendors has not carried over to software and services: American firms in 1983 supplied just 11 percent of the packaged software sold in France. In the market for computer services, they were said to be almost invisible. Trade sources note that American vendors of software and services could easily expand their share through aggressive marketing. The booming interest in microcomputers is expected to offer an excellent vehicle for boosting the market presence of all kinds of U.S.-origin software, with 1985 sales projected at almost $40 million (see table 2).

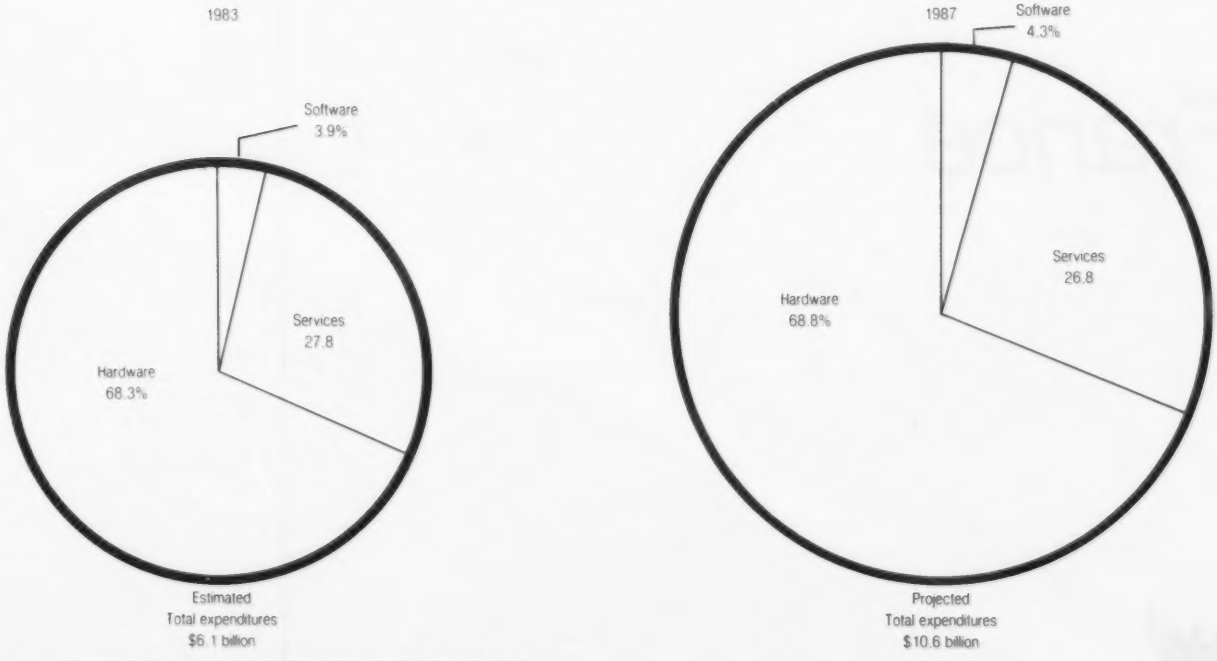
Accounting for over 60 percent of the French software market, sales of mainframe software amounted to $152 million in 1983. The growth of the software industry has left many computer installations with a diminished supply of in-house software writers, creating a need for more packaged programs. As users strive to extend the capabilities of their current hardware base, purchases of mainframe software are forecast to advance almost 15 percent per annum through 1987, to $262 million. Sales of operating systems are expected to keep pace with the overall market, while above average growth is anticipated for data base management systems (DBMS), utilities, and communications software. General business applications dominate, accounting for over 50 percent of the market in 1983. Industry experts predict that market saturation and a trend to more specialized applications will cut the share of general business packages to 40 percent of the total mainframe software market by 1987.

Software for minicomputers is expected to show faster growth than any other market segment, advancing at a swift 24 percent annual pace from $43 million in 1983 to over $100 million in 1987. Mini-based systems continue to find favor with users

[1] All values are shown in U.S. dollars. Local currency data are converted at the following exchange rates: US$1 = 5.371 francs (1981), and 8.143 francs (1983 and subsequent years). Values for years through 1983 are expressed in current rather than constant dollars/prices; values for 1984 and subsequent years are expressed in 1983 constant dollars/prices.

Figure

France: Expenditures for computer hardware, software, and services 1983 and 1987



Source: International Trade Administration, Market Research Division Research Report.

Table 1.—France: The market for computer software and services, 1981, 1983, 1987
(in millions of U.S. dollars)

	Mainframes			Minicomputers			Microcomputers		
	1981	1983	1987	1981	1983	1987	1981	1983	1987
Software									
Operating Systems	15.2	20.8	26.2	4.3	6.9	10.1	1.8	2.2	3.9
DBMS	9.1	14.6	21.0	3.0	5.5	8.1	2.3	3.3	3.9
Utilities	1.5	4.2	5.2	1.3	2.1	2.0	.9	1.7	2.9
Applications/spreadsheet	3.1	4.3	5.3	1.3	2.1	3.1	5.0	5.4	8.8
Applications/word processing	1.6	2.1	5.3	1.7	2.7	5.1	3.6	4.9	9.8
Applications/communications	10.6	16.6	23.6	3.0	5.5	9.1	2.3	3.2	6.9
Applications/general business	79.0	97.8	110.1	18.9	27.6	37.1	7.6	8.2	12.7
Applications/graphics	4.6	8.3	10.4	1.7	2.1	3.0	4.0	3.3	4.9
Applications/education	3.1	6.2	10.2	1.3	3.4	5.0	2.7	4.3	6.8
Applications/recreational	—	—	—	.4	.7	1.0	11.3	16.2	34.3
Applications/other	24.2	33.1	44.7	6.1	10.4	17.4	3.5	1.3	3.1
Total software	152.0	208.0	262.0	43.0	69.0	101.0	45.0	54.0	98.0
Services									
Custom software developers	545	545	505	106	133	164	37	68	91
Databank & timesharing establishments	107	154	228	29	49	92	9	26	46
EDP support service establishments	154	154	147	38	35	39	11	19	23
Retailing and leasing establishments	118	166	228	48	75	125	58	117	182
Applications consultants and systems engineers	142	224	326	51	80	131	56	117	182
Training facilities	118	154	194	49	72	106	16	30	48
Total services	1,184	1,397	1,628	321	444	657	187	377	572
Grand Total	1,336	1,605	1,890	364	513	758	232	431	670

Source: International Trade Administration, Office of Trade Information Services research report, "The Market for Computer Software and Services in France" (see Additional Information box). Figures in this report are based on data gathered in France, including available government statistics, industry reports, and trade source estimates and projections.

in the manufacturing, Government, financial, wholesale and resale trade, and professional sectors. As with mainframes, general business programs are losing ground to more specialized applications. From 44 percent of purchases in 1983, the share of general business packages is foreseen declining to 37 percent by 1987. Communications and educational applications, on the other hand, are forecast to show particularly rapid growth in market share, with sales rising more than 30 percent yearly. Substantial gains are also anticipated for DBMS, word processing, and technical applications.

Skyrocketing demand of microcomputers from 1983 to 1987 is not expected to generate commensurate growth in sales of micro software, which are forecast to climb from $45 million to $98 million over that period. Much of the hardware action is in the lower end of the market where users require inexpensive software and where intense competition has pushed prices down. Low-cost recreational programs accounted for 25 percent of micro software sales in 1983, and are foreseen trebling in volume, expanding their share to 35 percent of the market by 1987. Sales of utility, communications, word processing, and educational packages are also projected to climb more than 25 percent per annum. French consumers and business people are said to be highly receptive to the microcomputer as a learning tool and as an effective way of exchanging information electronically.

At $1.18 billion in 1983, the market for mainframe computer services was more than twice as large as those for mini and micro services combined. However, mainframe hardware is said to be nearing saturation, and the growing availability of packaged programs dampens the need for services. Reflecting increases of just over 8 percent a year, mainframe service expenditures are projected to reach $1.6 billion in 1987. Actual declines in spending are anticipated for customized software development and for electronic data processing (EDP) services such as data preparation and batch processing. On the other hand, sales gains averaging more than 20 percent yearly are predicted for timeshare/databank services and for the applications consultancy and systems engineering offered by systems houses. Use of data bases in particular is likely to expand as French telecommunications networks continue to improve. Leasing remains popular among local computer users, prompting forecasters to predict 18 percent annual growth in this service category. Somewhat more modest 13 percent expansion is anticipated for training services over the same period, as private sector users struggle to fill gaps in experienced hardware and software personnel.

Service revenues from the minicomputer sector are expected to more than double over the 1983-87 period, from $321 million to $657 million, easily topping the 16.5 percent per annum expansion anticipated in hardware sales. Growth will be spearheaded by timeshare and databank organizations, systems houses, and leasing organizations, all of which are projected to expand their share of the market. Timeshare/databank suppliers are foreseen

Table 2.—France: The market for computer software and services by leading supplier countries, 1983 and 1985

	1983	1985
Operating systems software		
United States	2.26	4.5
France	16.21	17.0
Germany	.52	1.8
United Kingdom	.47	1.5
Other	1.84	5.1
Total	21.30	29.9
Data base management systems		
United States	1.52	2.2
France	10.96	16.5
Germany	.47	1.0
Netherlands	.39	.9
Other	1.06	2.8
Total	14.40	23.4
Utilities software		
United States	.41	1.0
France	2.82	6.0
Germany	.15	.5
United Kingdom	.14	.3
Other	.18	.2
Total	3.70	8.0
Applications software/spreadsheets		
United States	1.11	2.0
France	7.20	8.0
Germany	.32	.7
Italy	.30	.6
Other	.47	.5
Total	9.40	11.8
Applications software/word processing		
United States	.81	1.3
France	5.25	6.3
Germany	.27	.5
Italy	.25	.4
Other	.32	1.2
Total	6.90	9.7
Applications software/communications		
United States	1.69	3.5
France	12.25	15.0
Sweden	.14	1.0
Germany	.12	1.0
Other	1.70	4.8
Total	15.90	25.3
Applications software/general business		
United States	3.04	6.0
France	96.96	120.0
Germany	.95	2.0
United Kingdom	.75	1.5
Other	3.80	4.1
Total	105.50	133.6
Applications software/graphics		
United States	1.07	1.8
France	7.84	8.5
Germany	.51	.9
Italy	.45	.8
Other	.43	1.7
Total	10.30	13.7
Applications software/education		
United States	.80	1.5
France	5.40	9.0
Germany	.17	.6
United Kingdom	.15	.3
Other	.58	2.5
Total	7.10	13.9
Applications software/recreational		
United States	2.25	3.5
France	7.90	8.0
United Kingdom	.60	.8
Germany	.31	1.0
Other	.64	3.6
Total	11.70	16.9
Other specialized applications software		
United States	10.52	12.5
France	18.34	24.0
Germany	2.07	3.0
Italy	1.09	2.0
Other	1.78	3.3
Total	33.80	44.8
Grand total	240.00	331.0
Total from the United States	25.48	39.8

Source: See source notation of table 1.

showing the most dramatic gains, more than trebling their volume from 1983 to 1987. Industry analysts expect providers of leasing, training, and systems integration services to benefit from the high percentage of mini installations that are upgraded each year. Losers over the 1983 to 1987 period are likely to include software developers, whose role will be diminished by the availability of packaged software, and data processing bureaus, whose back-up services are less in demand now that minis are more reliable and less apt to break down.

Past predictions that French microcomputer users would make only limited use of computer services have been proved wrong by the $187 million in revenues generated by vendors of microcomputer services in 1983. Sales are forecast to treble by 1987, representing 32 percent average annual growth. Systems houses, which provide applications consulting and systems engineering, and leasing and trading organizations, which also provide maintenance services, are forecast to make up almost two-thirds of the total market. Many French micro buyers complain bitterly about the high cost of after-sales service contracts offered by hardware vendors, and welcome the lower-priced service offered by independent leasing/trading companies. Custom software is still needed for specialized process control, medical, and scientific applications, but providers of tailor-made programs are expected to capture a declining share of the overall market. Some of their functions will be taken over by systems houses, which can obviate the need for custom programming by selecting and integrating the right mix of off-the-shelf hardware and software.

Leading Buyers

Despite a rapid 23 percent annual expansion anticipated for computer software and services expenditures by French professionals and consumers, institutions will continue to dominate the market.

Institutional buyers accounted for seven-eighths of total spending in 1983, and they are expected to make five-sixths of expenditures in 1987 (see table 3).

Biggest institutional buyers in 1983 were the manufacturing, finance and insurance, and Government sectors, which together accounted for 46 percent of French software purchases and 55 percent of service expenditures. France's more than 56,000 manufacturing establishments—the largest buyers of both software and services in 1983—are expected to retain that distinction through 1987. Computer users in this sector prefer to acquire most of their software and services from outside sources rather than developing them in-house. Manufacturers support such automation concepts as robotics, process control, flexible manufacturing systems, and computer controlled materials handling systems for warehousing. Computer-assisted design (CAD) and manufacture (CAM), as well as decision support systems, are currently being adopted. The industry's software needs include operating systems, general business applications, graphics, and CAD/CAM. Training is particularly popular among services, since in-house computer training has lagged in the past.

A pioneer in automation and electronic funds transfer, the financial and insurance services sector is projected to raise its software spending some 13 percent a year and its expenditures on computer services almost 10 percent yearly through 1987. In the latter year, the 500 large, 1,000 medium, and 8,000 small establishments in the sector are forecast to spend $62 million on software and $432 million on services. Primary software needs are those associated with account reconciliation, bills of exchange, commercial loan accounting, foreign exchange, customer information, credit card accounting, interbank transfer, actuarial and broker accounting, and life and health insurance tables, as well as operating systems. Services regularly demanded by bankers and insurance companies include systems planning, real time processing, databank access, and training.

The French Government employs over 2 million workers and is projected to spend some $510 million on software and services in 1987, up from just over $300 million in 1983. Automation is actively promoted in the public sector, and strong demand is predicted for operating systems, DBMS, and applications for accounting, financial planning, payroll, staff records, and word processing. Government organizations still rely heavily on outside service support although they boast a growing cadre of in-house professionals. Systems houses are often called upon to provide applications consultancy and systems engineering. Training, data base access, and batch processing are other sought-after services.

Among the fastest growing software expenditures by institutional sectors are those of educational and research institutions, whose combined spending is projected to rise from just $1 million in 1983 to more than $7 million in 1987. Over the next few years, application of microcomputers in education is expected to generate strong demand for computer-assisted instruction (CAI) and administrative packages. In the research sector, an acute need for software is anticipated as computer power is decentralized from large mainframes.

Sharpest growth in service spending is anticipated from the communications sector and from computer manufacturers. The French PTT owns Telesystems, a local service company which it uses for much of its data preparation work. Similarly, domestic computer manufacturers often buy services from their own subsidiaries.

Among professional/consumer buyers, management and engineering consultants are expected to account for the largest volume of purchases in 1987: some 35 percent of professional/consumer software spending and 30 percent of service expenditures. Virtually all consulting firms are likely to be computerized by that year, requiring substantial expenditures on software for project management, modeling, CAD, market and financial analysis, graphics, word and text processing, and stress test analysis. Services used are mainly those of leasing, trade-in, maintenance, databank access, batch processing, and systems engineering.

Table 3.—France: Expenditures for mini and micro computer systems by major institutional and professional/consumer sectors, 1983 and 1987
(in millions of dollars)

	Software		Services	
	1983	1987	1983	1987
Institutional Sectors				
Government	33.8	54.6	268	456
Finance and insurance	37.8	62.2	298	432
Manufacturing	39.8	80.5	357	576
Utilities	1.2	3.7	15	24
Transportation	6.4	10.9	30	48
Communications	7.3	14.6	74	168
Retailing and wholesaling	16.9	32.8	60	72
Health care	1.8	3.7	45	96
Educational establishments	.6	3.7	30	48
Research institutions	.4	3.7	45	72
Other institutional buyers	13.2	21.8	119	96
Computer manufacturers	39.8	71.8	148	312
Subtotal	199.0	364.0	1,489	2,400
Professional/consumer sectors				
Physicians	2.5	6.8	20	46
Attorneys	3.3	8.7	31	69
Accountants	7.4	18.4	41	82
Management and engineering consultants	16.4	33.9	61	137
Other professions	8.6	17.5	41	92
Consumers	2.8	11.7	9	31
Subtotal	41.0	97.0	203	457
Total	240.0	461.0	1,692	2,857

Source: See source notation of table 1.

Forecasts show consumers making the greatest percentage gains in software and service use over the 1983-87 period. The level of computer literacy in French society continues to improve, and as many as 10 to 15 percent of households could own microcomputers by 1987. Most popular programs for consumers are games, accounting, spreadsheets, simple word processing, and portfolio analysis.

Competitive Environment

French vendors of packaged software dominate the market, accounting for 80 percent in 1983. Over the next few years, however, foreign software vendors are expected to score substantial gains, boosting their share of sales to 28 percent by 1985. In services, a strong local industry will continue to win most of the business, though French subsidiaries of foreign-owned firms also play an active role.

U.S. suppliers of software packages led all other foreign competitors in 1983, accounting for 41 percent of imports and about 11 percent of the total market. They do better with recreational (19 percent) and specialized application (31 percent). Their weakest showing (3 percent) comes in the lucrative market for general business packages. U.S. success with systems software is reflected in the fact that five of the ten most popular systems packages in France in 1983 came from Applied Data Research (Vollie, Librarian), Computer Associates (CA-Sort, CA-Dynam/T), and Westinghouse (Faver). Other prominent American vendors include all the major hardware suppliers, as well as some specialized software publishers. Most of these firms have well-established local operations and have developed images as French companies.

U.S.-sourced software has lost much of the captive market it enjoyed in earlier years, when hardware suppliers provided a one-step source of programs. Locally developed software written and marketed with French users in mind captured a growing share of sales, though the tide has turned since 1981, when American vendors accounted for less than 8 percent of the market. Despite a strongly pro-French attitude among local buyers, the popularity of U.S.-built micros builds confidence in associated software. Over 50 percent of the microcomputer software available on the French market is said to be written for the IBM PC; another 10 percent is designed for Apple, Hewlett-Packard, Digital, and Commodore micros.

In the market for computer services, all but a half dozen of the nearly 90 companies active in France are domestically-owned. Among the exceptions are the European operations of IBM, General Electric Information Services (GEISCO), and Control Data. Industry experts note that there are no official barriers that would prevent establishment of U.S.-owned services operations in France. Local subsidiaries can quickly develop an image as domestic suppliers. End-users readily accept foreign-owned service companies as long as most of the customer contact is made by French-speaking local personnel. The biggest obstacle is the strong domestic service industry.

French suppliers of software and services have developed expertise in virtually all market segments. Sales of software to the local market amounted to more than $191 million in 1983, and are forecast to climb to almost $240 million by 1985. Scores of domestic companies have arisen in recent years to develop packaged software or, under license to foreign suppliers, adapt popular programs to the French market. Many of these start-ups have prospered; a few dominate the market. The ten largest firms account for about half the industry's output. By mid-1983, local vendors provided most of France's best-selling software packages. The industry has also gained a reputation for its software internationally, generating exports of about $42 million in 1983. With domestic demand booming, however, exports have slipped in recent years, turning France from a 5:1 net exporter of software in 1981 to a 5:7 net importer in 1983.

Most French software vendors also provide a broad range of computer services. The 10 largest rank among the top 20 computer services companies in Europe, and include SG2, CISI, GSI, SEMA, CCMS, CAP-Gemini-Sogeti, Thomson Informatique, Telesystemes, Sligos, and SESA. French service firms have made their gains with much less Government assistance than their hardware counterparts.

Third-country competition in both software and services is limited, consisting primarily of add-on sales and service support provided by hardware vendors. German suppliers consistently rank second among foreign software sources, but their 1983 sales amounted to less than one-fourth of U.S.-sourced shipments. Other countries with significant sales of software and services in France include the United Kingdom (Scicon, ICL), Italy (Olivetti, Finsiel), and Holland (Philips Data Systems).

Market Access

Domestic and foreign software packages reach users through variety of routes. Software for minis and mainframes has traditionally been sold directly to the final user, reflecting the commercial orientation of those markets. Microcomputer software, on the other hand, is increasingly sold through the network of dealers that has emerged for computer hardware. Dealers are said to handle some 40 percent of micro software, while hardware suppliers account for 28 percent and systems houses distribute about 21 percent.

Software shipped to France from outside the European Economic Community (EEC) carries a tariff of 5.7 percent. No nontariff barriers to U.S.-sourced software have been erected yet, but some form of

import licensing might be introduced if France's deficit in software trade continues.

Standards for computer hardware and software are issued by Association Francaise de Normalisation (AFNOR), which is in the process of coordinating French technical and safety standards with those of the rest of Europe. AFNOR also collaborates with the American National Standards Institute, which can provide up-to-date information on any applicable standards.

Additional Information

The project officers responsible for Country Market Surveys on Computer Software and Services are:

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The Survey summarizes a 103-page International Market Research (IMR) report prepared by Tactical Marketing Limited in the United Kingdom under contract for the U.S. Department of Commerce and reflects the opinions and views of interviewees in France and not those of the Department of Commerce. The IMR report gives considerably more detail on all the points touched upon in the Survey, as well as marketing practices, trade regulations, technical standards, and the names and addresses of prospective customers, potential agents and distributors, trade associations, and trade publications.

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